

There is no meadow there, as in Europe; no green savannah, as in North America; and yet the climate ought to be better than either of these. What can be the cause of this difference? It is not wholly the form of the surface, or the geological character of the strata; for these are not very dissimilar to those of countries which present a very different appearance. The trees and almost all the vegetables, are, no doubt, different; but, as is the soil, so is the vegetation, is very nearly a maxim in nature. No savannahs were found in Australia, because there were no beeves or buffaloes to graze upon them; and the grasses upon the uplands were in wiry tufts, few and far between, because there were no sheep to pasture there. The Kangurū was the only grazing animal; and it is not adapted to fine grasses, either in the structure of its teeth, or in those of its organs of locomotion.

The proper grazing mouth is that which has eight chisel-shaped cutting teeth in the under jaw, acting against a cartilaginous surface of the upper. These cut the herbage clean, without that pulling up by the roots which is apt to be performed by a mouth of any other structure. The mouth of the great Ka-gurū also contains eight cutting teeth; but they are very differently dispersed; for there are only two of them in the under jaw, and there are six in the upper. A mouth of this kind makes a ragged bite, and cankers the remainder of the vegetable upon which it feeds; so that a flock of kangurū would very soon destroy the grass of a park or meadow. Besides, the whole structure of the Australian animal fits it for a mode of life quite different from our grazing *Ruminantia*. The insignificant bulk of the anterior parts, the vast development of the posterior, the strong and rigid tail, which, with the two hind legs, makes a tripod upon which the animal can stand while it uses the short fore legs as a sort of paws, and the marsupium for the young, are all modifications for which there is no use in a grazing animal, but which would render such an animal very unfit for its place and office in nature.

The mouths of those pachydermatous animals which are domesticated, are also biting mouths, not grazing ones; and therefore their browsing does not improve the pastures to the same extent as that of the ox and the sheep. The cutting teeth of the horse and the ass are six in each jaw, and the males have always canine teeth, or tusks; and the hog genus have always six in the upper. They have also canines or tusks, which are very long and formidable in the male of the wild hog; but they are not true teeth, with a fang inserted in the alveola of the gum, like the canine teeth of the *Carnivora*; neither is their purpose that of killing prey,—they are inserted or formed upon a core of bone, and come under the description of defences, although they are also of use in holding one end of certain kinds of food, while the animal places the fore foot on the other, and so tears it to pieces. We need not say that the feeding of hogs does not in any way conduce to the improvement of the pastures upon which they are turned; for, if they are not ringed to prevent them from rooting, they plough up the surface and devour the roots of the plants. Even the horse, which comes perhaps the nearest to a grazing animal of all the order to which it belongs, cannot be said to be an improver of the surface. Its bite is ragged, and it is apt to tear up the herbage in tufts; and unless it can get "a long bite," it cannot subsist.

The characteristic grazing mouths are therefore those of the ox and the sheep—of which that of the sheep is decidedly the neatest; and, when either the one or the other of these is turned upon the proper pastures, not in too great numbers, they always improve the quality of that pasture. Sheep, indeed, bite so close, that they cannot be, with impunity, turned upon some of the more valuable artificial grasses; for

those grasses have crowns, or coronal plates, at or above the surface of the ground, from which alone, vegetation can be made; and if these are nibbled off, or even jagged and torn by sheep, the plants grow no more.

Oxen do not bite either so clean or so close as sheep; and therefore they require more rank herbage; but they can be allowed to pasture upon fields of those plants, the crowns and the vegetation of which would be destroyed by sheep. Thus, when we take even a very cursory view of the animals which have been domesticated, we are brought to the three ruminants, the ox, the sheep, and the goat, as the ones which first enticed man to have a fixed residence, and become a herdsman, and thence a cultivator; but which of them may have taken the lead is indeterminate.—*Mudie.*

FURS OF THE HUDSON'S BAY TERRITORY.—The most valuable of the furs is that of the black fox. This beautiful animal resembles in shape the common fox of England; but it is much larger and jet black, with the exception of one or two white hairs along the back bone, and a pure white tuft on the end of the tail. A single skin sometimes brings from 25 to 30 guineas in the British market; but, unfortunately, they are very scarce. The silver fox differs from the black fox only in the number of white hairs with which its fur is sprinkled; and the more numerous the white hairs the less valuable does it become. The cross fox is a cross between the black or silver and the red fox. The red fox bears a much inferior fur to the other kinds; yet it is a good article of trade, as this species is very numerous. These four kinds of foxes are sometimes produced in the same litter, the mother being a red fox. The white fox bears about the same value as the red, and is also very numerous, particularly on the shores of Hudson's Bay. The variety termed the blue fox is neither numerous nor very valuable. It is of a dirty bluishgray colour, and seldom makes its appearance at the company's posts. Beaver, in days of yore, was the staple fur of the country; but, alas! the silk hat has given it its deathblow, and the star of the beaver has now probably set for ever; that is to say, with regard to men: probably the animals themselves fancy that their lucky star has just risen. The most profitable fur in the country is that of the marten. It sometimes resembles the Russian sable, and generally maintains a steady price. These animals, moreover, are very numerous throughout most parts of the company's territories, particularly in McKenzie's River, whence great numbers are annually sent to England. All the above animals, and a few others, are caught in steel and wooden traps by the natives; while deer, buffaloes, &c. are run down, shot, and snared in various ways.—*Ballantine's Hudson's Bay.*

INTERIOR OF THE EARTH.—Professor Silliman has, among other matters of interest, concerning which he has made some very valuable observations, provided us also with the following suggestions. A fact, he remarks, of great interest has been proved by the borings for Artesian wells in the suburbs of Paris, namely that as we go towards the centre of the earth, the temperature increases at the rate of about one degree for every fifty feet. That the whole interior portion of the earth, or at least a great part of it, is an ocean of melted rock, agitated by violent winds, though I dare not affirm it, is still rendered highly probable by the phenomena of volcanoes. The facts connected with their eruption have been ascertained and placed beyond a doubt. How then are they to be accounted for? The theory prevalent some years since, that they are caused by the combustion of immense coal beds, is perfectly puerile, and is entirely abandoned. All the coal in the world would not afford fuel enough for a single capital exhibition of Vesuvius. We must look high-